DOCUMENT RESUME

ED 462 400 TM 033 662

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TITLE Investigating Former Title 1 Student Achievement "Fadeout": The Value of Knowing E.S.E. Status and Protective Factors.
PUB DATE 2001-00-00
NOTE 9p.
PUB TYPE Reports - Research (143)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Achievement Gains; Achievement Tests; Family Environment; Intermediate Grades; *Low Achievement; *Special Education; State Programs; Testing Programs
IDENTIFIERS Elementary Secondary Education Act Title I; *Protective Factors

ABSTRACT

Evaluation studies on the long-term achievement of early intervention program participants have often found that initial student achievement gains for many students dissipate in subsequent years. This study offers some possible explanations for achievement "fadeout" and examines this phenomenon in relation to Exceptional Student Education (ESE) status and various cognitive, school-related, and home life variables, including some "protective" factors. Test performance of former Title I students (n=185) on a fourth-grade state criterion-referenced test, the Florida Comprehensive Assessment Test (FCAT), was compared with that of 1,015 "non-Title I" students. Results show that when ESE students are excluded from the analysis of FCAT performance former Title I student performance was closer to the performance of non-Title I students. In a second analysis, high (n=53) and low (n=79) performing students were compared on a number of school and home variables. Differences were found on cognitive variables: CTB Terra Nova Reading, CTB Terra Nova Language, FCAT Writing, and classroom reading grades. ("TerraNova" CTBS[TM] Multiple Assessments are standardized achievement tests for grades 1-12 published by CTB, a division of the McGraw-Hill Companies.) No differences were found in school-related or home variables including those representing protective factors such as student engagement behaviors, home literacy activities, and expectations for school success. Findings suggest that the most relevant difference between former Title I students who succeed academically and those who struggle may be cognitive in nature and may indicate the need for long-term academic support mechanisms for some students. (Contains 15 references.) (Author/SLD)

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ED 462 400

Investigating Former Title 1 Student Achievement "Fadeout": The Value of Knowing E.S.E. Status and Protective Factors

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ABSTRACT:

Evaluation studies on the long term achievement of early intervention program participants have often found that initial student achievement gains for many students dissipate in subsequent years. This current study offers some possible explanations for achievement "fadeout" and examines this phenomenon in relation to Exceptional Student Education (ESE) status and various cognitive, school-related, and home life variables, including some "protective" factors. Test performance of former Title 1 students (n=185) on a fourth grade state criterion-referenced test, the Florida Comprehensive Assessment Test (FCAT) was compared to that of "nonTitle1" students (n=1,015). Results showed that when ESE students are excluded from the analysis of FCAT performance former Title 1 student performance was closer to the performance of nonTitle 1 students. In a second analysis high (n=53) and low (n=79) performing students were compared on a number of school and home variables. Differences were found on cognitive variables: CTB Terra Nova Reading, CTB Terra Nova Language, FCAT Writing, and classroom reading grades. No differences were found in school-related or home variables including those representing protective factors such as student engagement behaviors, home literacy activities, and expectations for school success. Findings suggest that the most relevant difference between former Title 1 students who succeed academically and those who struggle may be cognitive in nature and may indicate the need for long term academic support mechanisms for some students.

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TM033662

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Investigating Former Title 1 Student Achievement "Fadeout": The Value of Knowing E.S.E. Status and Protective Factors

Objectives

Determining the value of early interventions by examining student achievement in the years following program completion has been problematic. Evaluation studies have often found that initial student achievement gains dissipate in subsequent years. However, examination of subgroup performance has seldom included comparisons other than by race or gender. A study was undertaken to examine some possible explanations for reading achievement "fadeout", addressing two objectives:

(1) To explore an alternative method, incorporating ESE status, for examining Title 1 student reading achievement two years following program participation.
(2) To examine the differences between high and low-performing former Title 1 students on selected cognitive, school-related, and home variables including "protective" factors.

Background

When the impact of "preventative" programs for young children at-risk such as Head Start, Title 1, or Reading Recovery has been studied on a longitudinal basis, results have been mixed. What has commonly been found is that students in such programs show strong student gains at program completion, but a dilution or dissipation of those gains for many students when achievement is measured several years later. (Hiebert, 1996; Puma et al., 1997; Shanahan and Barr, 1995; Vinovski, 1999; Whitehurst et al., 1999). Slavin (1993) suggests that such findings are an indication that certain students may need continued support and reinforcement at key developmental points. Possible reasons for reading achievement "fadeout" trends include such explanations as the "fourth grade slump" (Chall, 1983), which describes a transitional development period in which certain students are susceptible to reading difficulties. Another possible explanation is the "Matthew Effect" (Stanovich, 1986), which, when applied to reading, theorizes that a performance gap between high and low performing students tends to grow increasingly larger over time due to low performing students' increasing lack of involvement with the reading process.

An alternative explanation for the disparity in long term achievement is the inclusion of Exceptional Student Education (ESE) students in long term comparisons. The ESE program provides services for students with learning disabilities and other significant learning issues that require special interventions over time. Programs for young children, whether at the preschool or primary grade level, occur at a time when many children are in the process of being evaluated for ESE services. In some school districts, Title 1 program participation may be used as an intervention strategy in evaluating a student's need for ESE services. Some of these students are subsequently staffed into ESE programs. These special needs students, because they were in Title 1, are included when

measuring the impact of Title 1 on a longitudinal basis. Some national and state testing programs, such as the Florida Comprehensive Assessment Test, exclude most ESE students for accountability purposes (Florida, 2001). Consequently, what is needed is a indicator of former Title 1 student performance that aligns with the current accountability conventions used to assess general student performance, i.e., excluding some ESE students. This may provide a different perspective of Title 1 student performance.

Another alternative explanation for reading achievement fadeout may be found in "resiliency" literature. Findings from this line of inquiry suggest that there are some "protective" factors associated with students who experience success in a school environment despite their personal or family risk factors (Kupersmidt et al., 1995; Lowden, 1999; Westfall and Pispia, 1994). Protective factors can involve such home life facets as effective parent-child interactions, support with schoolwork, expectations for success, and family or social activities. It could be that former Title 1 students who do well academically have more protective factors than those students who struggle. A comparison of high and low-performing students could reveal differences on protective factors that may lead to potential interventions or strategies for assisting low achieving students.

The local Title 1 program under study provides a balanced literacy program to first and second grade at-risk students experiencing significant difficulty in reading development. The aim of the program is to accelerate reading development through the student's use of reading strategies and literacy activities based on the work of Marie Clay (1985).

Methods

A sample of 1,200 fourth grade students from a southwest Florida school district of 17,000 K-12 students was selected. All students with complete data sets were used. Of these students, 185 were former Title 1 students, including 54 current ESE students. Of the 1,015 students not served in Title 1, 153 were current ESE students. The ESE students represented the following categories: Educable Mentally Handicapped, Othopedically Impaired, Emotionally Handicapped, Language Impaired, Specific Learning Disabilities, Severely Emotionally Disturbed, and Other Health Impaired. For the entire sample, 85% were Caucasian, 8% were African American, 4% were Hispanic, 2% were Asian, with the remaining 1% representing other ethnic groups. Fifty-one percent were female. Almost 47% received free or reduced lunch through the Federal Lunch Program.

In examining the effect of ESE inclusion in longitudinal test results, group performance by Title 1 and ESE status on the Florida Comprehensive Assessment Test (FCAT) was reviewed. The FCAT is a criterion-referenced achievement test that assesses a student's mastery of specific benchmarks from the Sunshine State Standards through the use of selected response and performance tasks. Student performance is reported by standard score (100-500 with a mean of 300) and achievement level (1-5 with 3 representing "proficient" performance). The fourth grade FCAT assesses student performance in Language and Literacy. Two comparisons were of primary interest: (1) former Title1 students and "nonTitle 1" students, (2) former Title 1 (including ESE students), former

Title 1 without ESE students, nonTitle 1 (including ESE students), and nonTitle 1 without ESE students. Statistical analyses included the use of a one-way analysis of variance, followed by a Scheffe multiple comparison test.

To address the second study objective involving differences between high and low performing students, former Title 1 students were tracked as they progressed to the fifth grade. Students were classified into two groups by fourth grade FCAT performance: High Performance (HP, FCAT levels 3-5) and Low Performance (LP, FCAT level 1). There were 132 fourth grade students who met the criterion: 53 HP and 79 LP. To examine possible differences, the groups were compared on a number of cognitive variables (third grade NRT Reading and Language scores, fourth grade FCAT Writing score, and classroom reading grade from the third and fourth grades) and school-related variables (mobility, days absent, Title 1 instructional days, and participation in school-based family literacy activities).

In the second stage of analysis the groups were compared on a number of home and school behaviors drawn from "resiliency" literature. A survey was developed containing 21 items (10 for parents, 11 for students) that represented selected support indicators such as help with homework, home literacy activities, family and club activities, student engagement behaviors, and expectations for school success. Ninety-nine students from the previous analysis who remained in the school system as fifth graders were surveyed along with their parents. Group responses for individual items were compared using an independent sample t-test.

Results

The demographics of the various groups included in these analyses of former Title 1 students were found to be fairly similar. A review of student performance on fourth grade FCAT Reading by Title 1 status reveals a difference in performance by subgroup. When Title 1 students were compared to their nonTitle 1 counter parts, the mean scale score of the nonTitle 1 students (315) was significantly higher than Title 1 students (285) [$t(1198) = 7.37$, $p < .01$]. When students were grouped by Title 1 and ESE status there were significant group differences among all four groups except between the two ESE groups [$F(3,1196) = 149.53$, $p < .001$]. It should be noted that when excluding the ESE students, Title 1 student performance (300) was at the test's mean level and was closer to nonTitle 1 student performance (325). When reviewing results by the percentage of students at proficient level performance (FCAT achievement levels 3 and above), similar patterns emerged. A greater percentage of nonTitle 1 students scored at Levels 3 and above (70%) compared to former Title 1 students (41%). When ESE students were excluded, a greater percentage of former Title 1 students were proficient (51%), but still at a lower rate than nonTitle 1 students (78%). However, the gap between Title 1 and nonTitle 1 student performance was reduced.

For the second objective, differences between high (HP) and low scoring (LP) former Title 1 students on selected cognitive, school-related and protective factors were analyzed. Not unexpectedly, results revealed higher HP mean values on the cognitive

factors: third grade NRT Reading [$t(130) = 5.79, p < .01$], third grade NRT Language [$t(130) = 4.52, p < .01$], fourth grade FCAT Writing [$t(130) = 3.50, p < .01$], and classroom reading grade [$t(130) = 4.17, p < .01$]. There were no significant differences reported for student mobility, school absences, Title 1 instructional days, or participation in school-based family literacy activities. This was somewhat unexpected since some previous research has shown a relationship of certain school-related factors with reading achievement (McGee, 1997; New Orleans Public Schools, 1994).

Students and their families were surveyed to identify differences related to protective factors. Items addressed student support behaviors such as help with homework, home literacy activities, family and club activities, student engagement behaviors, and expectations for school success. The response rate was 60%. For most items, little difference was noted in the responses between the two performance groups.

Discussion

This study addressed two issues related to former Title 1 student reading achievement "fadeout": (1) the evaluation of post-program achievement in relation to ESE status and (2) the examination of differences between high and low performing students on selected cognitive, school-related, and home variables, including "protective" factors.

In relation to the first issue, ESE status could not completely account for the gap in performance between former Title 1 and nonTitle 1 students on state CRT results. However, when ESE students were excluded, former Title 1 student performance was closer to the performance of nonTitle 1 students. Both former Title 1 and ESE students have some specific learning issues different from other students when achievement is measured on a state CRT such as the FCAT. These academic needs are evident from the identification for special interventions as well as the performance of many students on later achievement measures. Furthermore, findings suggest that ESE student needs are greater than that of former Title 1 students. Therefore, results suggest that former Title 1 student performance should be viewed with and without ESE students in order to most accurately determine achievement in relation to the general student population. The inclusion or exclusion of ESE students in longitudinal Title 1 studies should not be an either/or proposition, but should reflect current standards used in state or national accountability systems while accounting for the progress of all students.

When investigating the differences between high and low achievement groups of former Title 1 students, results were mixed and somewhat unexpected. The differences found pertained to cognitive variables: reading and language performance on standardized tests and classroom reading grades, which are consistent with previous research. However, no differences were found in school-related or home variables such as the number of Title 1 instructional days or degree of participation in school-based family literacy activities. Of particular interest was the lack of difference in representative protective factors such as help with homework, home literacy activities, student engagement behaviors, and expectations for school success. It could be that the most important differences between high and low performing students are cognitive in nature and possible interventions

should emphasize that relationship. It seems possible that certain students, once identified as having learning issues, require regular academic reinforcement on a long term basis to maintain gains made during initial intervention programs.

Finally, some limitations to this preliminary study include the potentially differential survey responses represented by nonresponding families as well as the restricted number of survey items representing the protective factors. Future research efforts could attempt to increase the number of participating families and develop a more comprehensive survey instrument for measuring the protective factors. Efforts should focus on identifying the kinds of former Title 1 students who require continued academic support.

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